

Scytalopus micropterus: Ecuador: 8 Napo (ZMUC, ANSP, MECN), 1 Zamora-Chinchiipe (ANSP).
Scytalopus atratus confusus: Colombia: 5 Huila (FMNH, AMNH, ANSP), 2 Valle del Cauca (AMNH).
Scytalopus canus opacus: Ecuador: 11 Carchi (ZMUC, ANSP), 8 Napo (ZMUC, ANSP), 2 Azuay (ZMUC, MECN), 9 Zamora-Chinchiipe (ZMUC, ANSP, MECN).
Scytalopus latrans latrans: Ecuador: 3 Carchi (ZMUC, MECN, ANSP), 2 Sucumbios (ZMUC, MECN), 2 Imbabura (ZMUC), 5 Pichincha (ZMUC, MECN), 4 Cotopaxi (ZMUC), 1 Cañar (ZMUC), 3 Napo (ZMUC, MECN).

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Clytoctantes (atrogularis?) in Amazonas, Brazil, and its relationship to Neoctantes niger (Thamnophilidae)

by *Bret M. Whitney*

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The Rondonia Bushbird *Clytoctantes atrogularis* ranks among the most poorly known of all Thamnophilidae, having remained something of a mystery since its discovery in 1986. It is known from a single, adult female specimen, and two sightings of presumed adult males, all from Cachoeira Nazaré, Rondônia, Brazil (Lanyon *et al.* 1990). On 20 July 2004, I located a pair of *Clytoctantes* bushbirds, presumably *C. atrogularis*, on the left bank of the upper rio Sucunduri, Amazonas, Brazil (06°53'S, 59°04'W), c.460 km north-east of Cachoeira Nazaré. This locality was several km above the point where highway BR-230 (the Transamazônica) crosses the Sucunduri. As I walked through a belt of dense secondary growth running between tall, undisturbed *terra firme* forest and a manioc plantation shortly before dusk, I was alerted by a vocalisation strongly reminiscent of a frequently delivered call of *Neoctantes niger* (Black Bushbird). I tape-recorded the vocalisation on a Sony TCM-5000 recorder, using a Sennheiser ME-67 cardioid microphone. Before playing the recording, I moved closer and found a pair of *Clytoctantes* bushbirds foraging in dense, low vegetation. They were undisturbed by my close presence, but the tangled vegetation and waning light hampered observation. The female (chestnut bird) was seen well. It closely matched the description of the holotype (Lanyon *et al.* 1990) and my own notes on that specimen taken on a visit to the Museu de Zoologia da Universidade de São Paulo (MZUSP), where it is housed, except that the black of the throat appeared to extend further on to the side of the face near the eye, and the outer remiges on the folded wing seemed contrastingly darker than on the holotype. The male looked entirely black but was not seen sufficiently well to allow further description.

During c.3 minutes of observation, the birds stayed within about 5 m of each other, with the female following the male a few seconds after the latter made short

flights between foraging stations. The male foraged from *c.*20 cm above ground to as high as about 2.5 m, hammering loudly (sounding like a small woodpecker) on the rachis of a large (>2 m long), dead *Heliconia* sp. leaf for several seconds, and at the broken tip of a dead branch *c.*2 cm in diameter; unfortunately, the bird was never clearly visible because of intervening vegetation. Both the male and female performed a short, stiff, lateral jerk of the tail, which was then held at the canted position for *c.*0.5 second before being twitched again in a short, slightly upward or downward direction, back toward the other side of the body, ranging through an arc of *c.*60° in the course of several seconds.

The birds showed little interest in playback of the recording of their own vocalisation. This call was a fairly loud, multi-syllabic, tremulous whistle becoming slightly protracted and fainter at the end, the whole lasting a little less than 2 seconds (Fig. 1a). It was given two or three times when the birds were initially startled by my sudden appearance but not subsequently, after they had become aware of my actions; it is best classified as an alarm call. No other vocalisation was heard. A vocalisation of *Clytoctantes atrogularis* was described by D. F. Stotz in Lanyon *et al.* (1990) as 'a very loud, trilled whistle, 'tree-tree-tree,' at irregular intervals.' I suppose that the alarm call I recorded could be so transcribed.

Bushbird relationships

Lanyon *et al.* (1990) remarked on the close relationship between *C. atrogularis*, *C. alixii* (Recurve-billed Bushbird) and *Neoctantes niger*. Their analysis was limited to external morphological similarities that they judged to be homologous, particularly the shared bill shape in which the mandible is strongly recurved, with the subterminal tomial notch displaced above the basal portion of the commissure. They also provided a map of the general distributions of these species. There appear to have been no more recent records of either species of *Clytoctantes*; the distribution of *Neoctantes niger* was updated by Zimmer & Isler (2004), the main change being addition of some records from south-west Amazonia and one from the west bank of the middle rio Madeira. Although the two genera are allopatric as far as is known, I would not be surprised to learn that they are at least narrowly sympatric (but perhaps not syntopic) in the poorly studied Madeira-Tapajós interfluvium.

Zimmer & Isler (2004) considered 'relationships uncertain' (presumably with other species-groups) for the two species of *Clytoctantes* and *Neoctantes*. I concur with Lanyon *et al.* (1990) that all these species and the two genera are quite closely related. In addition to the shared morphological characters documented by those authors, *Clytoctantes atrogularis* and *Neoctantes* exhibit remarkable similarities in their alarm calls (Fig. 1), which they typically give 1–3 times in the presence of a potential threat (such as approach of a person). This vocalisation possesses a nearly symmetrical, very rapidly repeated oscillation through a wide frequency band (*c.*1 kHz [*n*=6] for *N. niger* and 1.7 kHz [*n*=1] for *C. atrogularis*), and is further

characterised by multiple, short bursts that increase in duration toward the end of the vocalisation while losing amplitude, the whole lasting 1.5–2.0 seconds. Structure and auditory quality of this call are unique in the Thamnophilidae. The alarm call of *Clytoctantes alixii* has not been recorded, but will almost certainly prove to be very similar.

The loudsong of both species of *Clytoctantes* is unknown, but it is likely, I predict, to be reminiscent of the loudsong of *Neoctantes niger*, which is a monotonous, steadily paced series of short, clear, whistled notes centred between c.1.5 and 1.8 kHz (Fig. 1c; also see Isler & Whitney 2002, disc 1: 46). Although *Neoctantes niger* is monotypic (Zimmer & Isler 2004), it displays some geographically structured variation in its loudsong, with birds north of the río

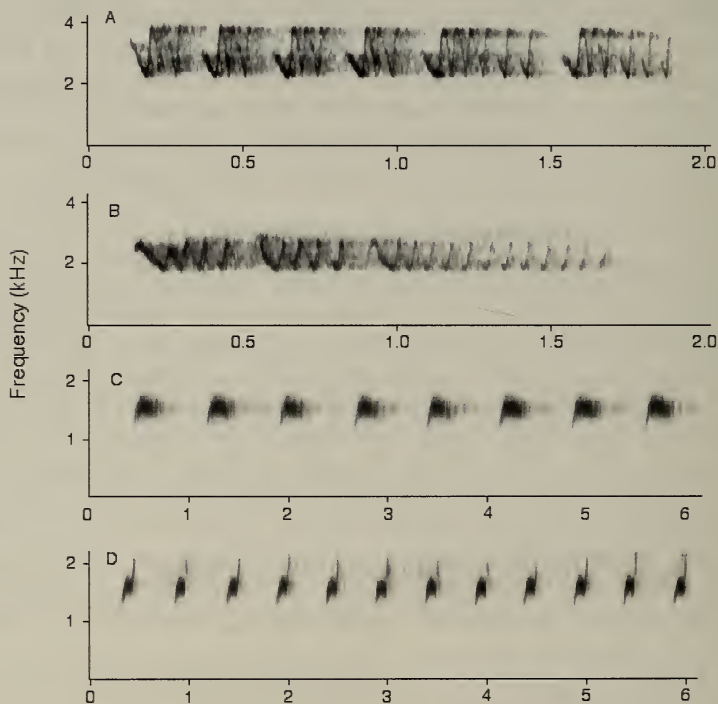


Figure 1. Some vocalisations of *Clytoctantes* and *Neoctantes* bushbirds. (A) *C. atrogularis* alarm call (Brazil: Amazonas; rio Sucunduri); (B) *N. niger* alarm call (Peru: Loreto; Quebrada Sucusari, right bank lower río Napo); (C) *N. niger* loudsong (Peru: Loreto; Quebrada Sucusari, right bank lower río Napo); (D) *N. niger* loudsong (Peru: Loreto; lower río Javari). Original recordings (all by BMW) made on Sony TCM-5000 recorders with Sennheiser ME-80 (C) and ME-67 (A, B, D) shotgun microphones on Maxell Type II 60-minute tape. Spectrograms generated with Canary 1.2.4 of the Bioacoustics Research program of the Cornell Lab. of Ornithology, Ithaca, New York, using default settings and 92% overlap. All recordings are archived at the antbird research archive of Morton & Phyllis Isler, Alexandria, Virginia.

Marañón/rio Solimões singing significantly slower than birds south of the river (noticeable in the field without resort to spectrographic analysis), and duration of individual notes appears to average somewhat longer (compare Fig. 1c and d; most individuals may not be this different, although some are even more different). In the case of *N. niger*, birds recorded immediately after tape playback appear to deliver the loudsong at a slightly faster pace (shorter inter-note intervals; pers. obs.); thus, measurements of loudsong characteristics should be made from natural (unsolicited) songs or from steadily paced, middle sections of songs given several minutes after playback, when birds have resumed a natural rhythm. The structure of notes may also differ slightly; further study of geographic variation in *Neotantes niger* is in progress.

As has been described for *Clytoctantes alixii* (summarised by Zimmer & Isler 2004) and *C. atrogularis* (Lanyon *et al.* 1990; this report), *Neotantes niger* forages by gleaning, hammering and probing, mostly in soft, often decaying stems, vines and thin trunks. Subsurface foraging manoeuvres were described by Zimmer & Isler (2004) as 'using the bill to hammer repeatedly at a branch, woody vine, palm rachis, or rotten log until a hole is opened; then uses the uniquely shaped bill as a wedge to pry loose strips of live bark or stem fibres, or to flake off dead bark, afterwards picking repeatedly at small subsurface prey'. This is a good general description, although prying loose of live bark and stem fibres by *N. niger* must be a rare behaviour, as I have never observed it during numerous encounters with the species. I believe one of the most common subsurface techniques is hammering into a soft, usually dead stem, followed by forceful, side-to-side motion of the head as the bill is wedged forward, opening a slit to expose the hollow centre of the substrate, from which small arthropods are extracted as they become exposed. Such slits (Fig. 2) may exceed 30 cm in length. *Neotantes niger* shares the distinctive, sideways-twitching tail motion described above for *C. atrogularis*, and does it frequently while foraging. Although this shared tail motion has not been described previously for either genus, it is unique in the Thamnophilidae except, perhaps, for



Figure 2. Dead stem opened by a male *Neotantes niger* in search of endophytic arthropods, photographed immediately after the bird had left the area; left bank of the lower rio Javari, Loreto, Peru, August 2004 (Bret M. Whitney)

the similar but slighter tail motions of some *Myrmotherula* antwrens (e.g., Ihering's Antwren *M. iheringi* and Rio Suno Antwren *M. sunensis*: pers. obs.).

Morphological, vocal and behavioural homologies provide a convincing body of evidence that, in the context of the Thamnophilidae as a whole, *Neoctantes* and *Clytoctantes* are sister taxa. An argument could be made for subsuming *Clytoctantes* in *Neoctantes* but, absent evidence from molecular analysis that *Neoctantes niger* falls between the two species of *Clytoctantes*, which seems quite unlikely, I recommend that the two genera be maintained based on the morphological distinctions identified by Lanyon *et al.* (1990), at least. Relationships of the bushbirds to other genera in Thamnophilidae are obscure and will probably be elucidated only by well-corroborated phylogenetic analysis of the entire family.

Conservation

Assuming that the birds I found on the rio Sucunduri of southern Amazonas are the same as *C. atrogularis* from Rondônia, it is now apparent that the distribution of *C. atrogularis* covers a significant area of south-central Amazonian Brazil. It occurs in man-made second-growth and probably evolved in successional forest habitats. It is to be expected throughout the area between the two known localities and should be sought throughout Amazonia in *terra firme* forest edge, regrowth and naturally successional forest habitats. Its centre of distribution is probably the upper rio Madeira/Tapajós interfluvium.

Until information to the contrary becomes available, observers should listen for *Neoctantes*-like songs and perhaps attempt to elicit response from a bushbird with tape-playback of *Neoctantes*; I will send a copy of the alarm call of *Clytoctantes* recorded on the rio Sucunduri by e-mail attachment (360 kb) on request (if the recording is then copied for others, please forward this information to me).

Fortunately, the dam project designed to flood the Cachoeira Nazaré area was abandoned (*contra* Zimmer & Isler 2004), and there is apparently no active plan to complete it, although other dam-building projects in Rondônia are apparently moving forward (Fearnside in press). It is greatly encouraging that the state government of Amazonas, Brazil, as part of its Programa Zona Franca Verde, has just signed into law (17 February 2005) the creation of a mosaic of nine conservation areas covering 3,070,058 ha of mostly forested land in the south of the state. More than half of this area is in the heretofore greatly neglected Madeira/Tapajós interfluvium. Most of the new reserves will be open to sustainable use of some sort, but the Parque Estadual do Sucunduri, at more than one million ha, and Parque Estadual do Aripuanã (nearly 370,000 ha) should remain in a completely natural state, protecting some of the most biologically important lands on Earth (see www.sds.am.gov.br/noticia.php?xcod=943). Brazil's federal government will purportedly soon announce the creation of further large conservation units in the region.

BirdLife International (2004) currently lists the conservation status of *Clytoctantes atrogularis* as Critical. For the present, however, I suggest that the species be reverted to its prior conservation status of Data Deficient (Stattersfield *et al.* 1998). Despite ongoing deforestation in the southern part of the range, *C. atrogularis* may actually benefit somewhat from the opening of forested areas.

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The nest, eggs and incubation behaviour of Sickle-winged Guan *Chamaepetes goudotii fagani* in western Ecuador

by Harold F. Greeney

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Sickle-winged Guan *Chamaepetes goudotii* ranges from Colombia to Peru and northern Bolivia (del Hoyo *et al.* 1994). In Ecuador there are two subspecies, *tschudii* in the east and *fagani* in the west (Delacour & Amadon 1973, Ridgely & Greenfield 2001). Ridgely & Greenfield (2001), however, noted the possibility that *fagani* deserves species rank.

Though Delacour & Amadon (1973) described Sickle-winged Guan as feeding 'much on the ground' and commonly descending from trees, my own experience in